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MICHIGAN Environmental Council

February 2, 2015

Natural Resources Committee
Re: HB 5255

Dear Committee members:

The Michigan Environmental Council is a coalition of more than 70 member groups around the state. We have closely followed the aquaculture debate in Michigan since it was brought to our attention early last year.

The state has already detailed net-pen commercial aquaculture in the Great Lakes is not worth the risk in the science reports that were published last October. Though we wish the science panel report had gone into greater detail on many of the risks that this type of operation would pose to our Great Lakes, it does confirm our primary concerns: disease, nutrients, and fish escapement. The reports also show that nothing could be done to truly mitigate those concerns.

We urge you to support the common sense legislation, HB 5255, that is before you today. This legislation is important to send a message that Michigan is the leader in ensuring our Great Lakes are managed responsibly in a way that protects this important natural resource.

Disease

We have seen diseases like Bacterial Kidney Disease run rampant through the Great Lakes. The threat from disease coming from aquaculture is twofold. It includes both introduction of new diseases and mutation and amplification of diseases that are already here.

In 2007, a bay in Chile that was full of fish farms saw over 65% of the farmed fish die from Infectious Salmon anemia (ISA). Chile has been fighting this ISA outbreak for the last 8 years. ISA occurs in many other places where salmonids are farmed, including Norway and Eastern Canada. The latest research shows that ISA is likely also present in British Columbia fish farms, and may be tied to the wild salmon decline near these farms. ISA is devastating in that it can be asymptomatic but contagious for a long time, and can ultimately reach a 90% mortality rate.

This is a top-risk disease, and we have already seen many mutations occur. Though rainbow trout currently are not susceptible to ISA, they can be carriers of the virus and can spread it to other fish. This disease therefore would still put our salmon fishery at risk. The close confinement and sheer number of fish

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associated with net pen aquaculture also increases the chances of a mutation that would affect rainbow trout, since the more fish it infects, the more opportunities it has to mutate. Countries that do a lot of fish farming–even those with strong regulations—have issues with disease outbreaks. The only sure way to keep disease like ISA out of the Great Lakes is not allow the farms where it can quickly breed and easily mutate.

Nutrients

There is simply no way to treat or contain the nutrients released from a net pen system in the form of fish waste and excess food. We are beyond the point where we can just use the Great Lakes to dilute our pollutants. At this point, adding more nutrients to the lake system increases the risk of nuisance and toxic algal blooms. We already see outbreaks across the Great Lakes, not just in Lake Erie. Excess nutrients also increase the risk of anoxic "dead zones" in the lakes.

These nutrient-driven problems are already occurring. In 1998, authorities shut down a Great Lakes fish farm in Canadian waters after it caused both algal blooms and anoxic conditions. Years later these ecological effects were still ongoing. The science panel found that these nutrient contributions would be detrimental both to the environment and to business. The phosphorus loads from fish farms will contribute to the total maximum loads the lakes can handle, meaning that other industry may be forced out.

The state has worked hard for many years to address the nutrient loading issues in the lakes. Michigan has forced wastewater treatment plants to decrease their loads, has banned phosphorus use on residential lawns, and is working on ways to get more farms to address nutrient runoff. The total maximum loads in the Great Lake Water Quality agreements should not be looked at as a quota to reach, and more phosphorus should not be added to the lakes for the benefit of a few. It is patently unfair to allow some users to put more untreated phosphorus in the lakes, when we are asking others to spend millions of dollars a year to keep as much possible out.

Escapement

The science panel also confirmed our worst fears about fish escapement. Though the farms may stock fish that are bred to be sterile, this is not a perfect breeding system, and these fish could interact with the wild breeding stock. The panel report found these fish "can survive multiple years, move 100s of kilometers, even into other lakes, and likely reproductively interact with extant populations." These escapes will occur, as despite best efforts and best practices, documented large scale escapes have occurred around the world. These include a storm event in Scotland freeing 300,000 fish, and 40,000 fish escaping in British Columbia through simple worker error when employees accidently cut the net during cleaning. These escapes risk the genetic diversity of our wild stock. This puts the ecology of the lake systems at risk. These fish could

outcompete our wild stock, and do not have the same instincts or behaviors as the wild fish.

There are other options

To us, the most telling thing about the reports is the economics involved in Great Lakes net pens. The science panel report states that allowing these net pens in the lakes would make other forms of aquaculture—the forms that can be environmentally friendly and truly sustainable—at a competitive disadvantage. The economic reports also state that the first two net pens, each producing 1 million pounds of fish a year, would create only 44 total jobs statewide. That estimate is based on an assumed market price for fish that one of the state's other reports says is probably higher than realistic. These farms would put Michigan's 38,000-job, $4.2 billion sport fishing industry at risk, for 44 jobs. To us, this is not a fair trade.

Instead of looking at net pens in the Great Lakes, the state's investment of time should be directed at developing regulatory certainty for land-based systems. The state should look at a general permit for recirculating aquaculture systems (RAS). These systems are truly the future of aquaculture. RAS is done on land, in tanks, where there is no risk of fish escapes or disease outbreaks in our wild fish. RAS operations recycle 99% of the water they use, and the nutrients produced can be an input for growing other crops instead of simply a waste byproduct.

Net pen aquaculture presents unacceptable risks and pushes the cost of waste treatment onto the public. Our children and grandchildren will bear the cost of this subsidy for private interests, possibly by losing the ability to use and enjoy the Great Lakes as we do today. We feel that net pen aquaculture is a step backward for the state, and for the aquaculture industry. Instead, we should look forward and support the sustainable RAS fish farms that can be built in an environmentally sound fashion.

Thank you,

Sean Hammond

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Michigan Environmental Council